



Egyptian Herbal Monograph

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Volume 3

Herbal Formulations Used in Egypt

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Milk thistle, Turmeric, Dandelion شوك الجمل / كركم / هندباء

1. Names & Synonyms

Milk thistle

Silybum marianum L. Gaertn. (1).

Family: Compositae (Asteraceae) (2). (1).

Syns.: *Carduus marianus* L. (1).

Arabic: Shawk Sennari شوك سناري, Shok El-Gamal شوك الجمل (2).

English: Milk thistle and St. Mary's thistle (2).

Turmeric (3)

Curcuma longa L.

Family: Zingiberaceae.

Syn. *Curcuma domestica* Valetton.,

Arabic: Kurkum كركم

English: Turmeric.

Dandelion

Taraxacum officinale Weber

Family: Asteraceae/Compositae (4-8).

Syns.: *Leontodon taraxacum* L., *Taraxacum vulgare* (Lam.) Schrank, *T. campyloides* G. E. Haglund. (8,9).

Arabic: Handebaa, Hindbeh, Hindiba هندباء

English name: Lion's Tooth (2, 10-12), Common Dandelion (10,11), Dandelion (8).



2. Parts used for medicinal purpose

Milk thistle: Dried ripe fruits, freed from the pappus (1).

Turmeric: dried rhizome (3,13,14).

Dandelion: Leaves, roots and root with herb (whole plant) (3 - 7).

3. Major chemical constituents

Milk thistle (2, 15-18)

- **Flavonolignans:** Silymarin mixture mainly (silybin A, silybin B, isosilybin A, isosilybin B, silychristin, isosilychristin, silydianin).
- **Flavonoids:** Taxifolin, apigenin, kaempferol and their derivatives.
- **Fixed oil:** Linoleic, oleic, palmitic and stearic acids.
- **Sterols:** Tocopherol (vitamin E) and phospholipids.
- **Others:** Mucilage, sugars, amines and saponins.

Turmeric

- **Curcuminoids:** A mixture of curcumin, monodesmethoxycurcumin and bisdesmethoxycurcumin (3,19)
- **Essential oil:** Composed of a number of monoterpenes and sesquiterpenes, including sesquiphellandrene, ar-turmerone, curcuminol, *cis*- β -elemenone, zingiberene, curcumene, α - and β - turmerone (3,19,20)
- **Others:** Acidic polysaccharides (19)

Dandelion

- Generally, dandelion plant is rich in polysaccharides, phenolic acids, flavonoids, terpenoids, minerals (particularly potassium), amino acids, and vitamins (11,21)

Roots:

- **Polysaccharides:** Inulin (11,21)



- **Phenolic acids:** Chicoric, chlorogenic, caffeic, monocaffeoyltartaric, hydroxycinnamic, synergic, vanillic and *p*-hydroxyphenyl acetic acids (11,21)
- **Sesquiterpene lactones:** 4,11 β , 13, 15''-Tetrahydroridentin B and taraxacolide-Oglucopyranoside (7, 22), 11,13-dihydrolactucin and ixerin D (23), and taraxinic acid Dglucopyranoside, its 11,13-dihydro-derivative (7) and ainslioside (22 - 24).
- **Minerals:** Mainly potassium (25).
- **Others: Sterols/Triterpenes:** Taraxasterol, β -taraxasterol, their acetates and their 16-hydroxy derivatives arnidol and faradiol, β -sitosterol, β -sitosterol-Dglucopyranoside and stigmasterol, and β -amyrin (22, 26, 27). A Triterpenoid: 3 β hydroxylup-18(19)-ene-21-one in fresh roots (23).

Leaves:

- **Phenolic acids:** Chicoric, caffeic and chlorogenic acids (11).
- **Flavonoids:** Luteolin, quercetin, apigenin, and their glycosides (11).
- **Sesquiterpene lactones:** Taraxinic acid β -D-glucopyranoside and 11 β , 13dihydrotaraxinic acid (28).
- **Coumarins:** Cichoriin and aesculin (11).
- **Minerals:** Mainly potassium (25).
- **Others:** Polysaccharides and ascorbic acid (11).

4. Medicinal Uses (Indications)

- A) Symptomatic relief of digestive disorders, sensation of fullness and indigestion.
- B) Support liver function, after serious conditions have been excluded by a physician.

5. Herbal preparations correlated to medicinal use

Combination of milk thistle dry extract (extraction solvent: acetone), turmeric dry extract (extraction solvent: water-ethanol 96%) and dandelion dry extract (extraction solvent: water).

Herbal preparations are in pharmaceutical dosage forms. The pharmaceutical form should be described by the pharmacopoeia full standard term.



6. Posology and method of administration correlated to medicinal use

Adults and elderly:

Combination of 350 mg of milk thistle extract, 21.4 mg of turmeric extract and 3.75 mg of dandelion extract.

Method of administration: Oral use.

7. Contraindications.

- Hypersensitivity to any of the active substance and to other plants of the same families.
- In case of obstruction of the bile duct, cholangitis, liver disease, gallstones and any other biliary diseases due to possible stimulation on bile secretion. (3,13,14)
- Hormone-sensitive conditions such as breast, uterine and ovarian cancers, endometriosis or uterine fibroids (29,30).
- The use in patients with renal failure, diabetes and/or heart failure should be avoided because of possible risks due to hyperkalemia (4,6)

8. Special warnings and precautions for use

- If the symptoms worsen during the use of the medicinal product, a doctor or a pharmacist should be consulted.
- The use in children and adolescents under 18 years of age has not been established due to lack of adequate data.
- If icterus or a change in colour of urine or stool appears, the medical doctor should be consulted immediately. (31)
- Patients with conditions where reduced fluid intake is advised by a medical doctor, dandelion root is not recommended (6)
- Coagulation studies should be monitored in the case of long-term treatment of turmeric (12).



9. Interactions with other medicinal products and other forms of interaction

- Using with anticoagulants/ antiplatelets/NSAIDs and anticoagulant/ antiplatelets herbs may result in an increased risk of bleeding. So, concurrent use should be avoided. (12).
- Immunosuppressants (cyclosporine): it may decrease the effectiveness of immunosuppressants. So, concurrent use should be avoided. (12).

10. Fertility, pregnancy and lactation

- Safety during pregnancy and lactation has not been established. In the absence of sufficient data, the use during pregnancy and lactation is not recommended
- No fertility data available.

11. Effects on ability to drive and use machines

- No studies on the effect on the ability to drive and use machines have been performed.

12. Undesirable effects

- Adverse effects are mainly transient, non-serious, gastrointestinal complaints. It is stated that silymarin may occasionally produce a mild laxative effect (2).
- Allergic reactions (4-6) including anaphylaxis and pseudoallergic contact dermatitis may occur. Cross-reactivity has been reported in individuals with an allergy to the pollen of other members of Asteraceae family (2).
- Mild symptoms of dry mouth, flatulence, gastric irritation (13).
- Hypersensitivity reactions, including contact dermatitis (20).
- If adverse reactions occur, a doctor or a pharmacist should be consulted.



13. Overdose

No case of overdose has been reported.

14. Relevant biological activities

Not required as per Egyptian guidelines for registration of herbal medicines.

15. Additional information

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16. Date of compilation/last revision

20/04/2026



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